Name of contributor or name of contributing organization:

Simmons, Charles

Is this contribution from a person or group not affiliated with a research organization?

Yes, this contribution is from a "Citizen Scientist."

Name and organization for all contributors. Indicate primary contact and total number of people who may have contributed to your Outlook, even if not included on the author list.

Simmons

Do you want your June contribution to automatically be included in subsequent reports? (If yes, you may still update your contribution via the submission form.)

[Do you want your contribution for this month to automatically be included in subsequent reports?]

What is the type of your Outlook projection?

Statistical/ML

Starting in 2017 we are accepting both pan-Arctic and pan-Antarctic sea ice extent (either one or both) of the September monthly mean. As in 2016, we are also collecting Alaskan regional sea ice extent. To be consistent with the validating sea ice extent index from NSIDC, if possible, please first compute the average sea ice concentration for the month and then compute the extent as the sum of cell areas > 15%.

a) Pan-Arctic September extent prediction in million square kilometers.

4.1

b) same as in (a) but for pan-Antarctic. If your method differs substantially from that for the Arctic, please enter it as a separate submission.

c) same as in (b) but for the Alaskan region. Please also tell us maximum possible extent if every ocean cell in your region were ice covered.

"Executive summary" of your Outlook contribution (using 300 words or less) describe how and why your contribution was formulated. To the extent possible, use non-technical language.

This estimate is a linear regression of Moana Loa CO_2 monthly CO_2 concentrations, Northern Hemisphere snow area, and arctic ice area. The idea is to loosely model solar energy absorbed and retained.near the Arctic. (Similar estimates can be obtained using the Year instead of the Moana Loa CO_2 concentration.)

For May 2022, the estimate of a September sea ice extent of 4.1MK^2 is on trend. (The anomaly is -0.01MK^2. A simple linear regression of the September sea ice extent would produce the same prediction.)

This regression is a minor variant of an approach used by Rob Dekker.

Brief explanation of Outlook method (using 300 words or less).

This is a simple linear regression of published May 2022 average values.

snow_area is downloaded from https://climate.rutgers.edu/snowcover/table_area.php?ui_set=2 . The link is the northern hemisphere monthly link. (Due to limitations of my schedule, I'm using an estimated value of 16.66MK^2 for the May 2022 average snow area.)

Moana loa co2 is downloaded from https://gml.noaa.gov/ccgg/trends/data.html

Ice area is obtained from ftp://sidads.colorado.edu
DATASETS/NOAA/G02135/north/monthly/data/

Tell us the dataset used for your initial Sea Ice Concentration (SIC).

N/A

Tell us the dataset used for your initial Sea Ice Thickness (SIT) used. Include name and date.

N/A

If you use a dynamic model, please specify the name of the model as a whole and each component including version numbers and how the component is initialized:

If available from your method.
a) Uncertainty/probability estimates:

Median

Lower error bound

Lower error bound

Standard Deviation

0.5

b) Brief explanation/assessment of basis for the uncertainty estimate (1-2 sentences).

This is the error measured by the linear regression.

c) Brief description of any post-processing you have done (1-2 sentences).